

ACCESSION NR: AP3003052

temperature reached a maximum. Only two zones were observed for hexogen; absorption decreased in the first and remained constant in the second. The results indicate that the condensed phase is dispersed during combustion at elevated pressures. In the combustion of the powder, the combustion efficiency and temperature increased continuously with pressure up to a maximum of 2350°K at $(490-539) \cdot 10^4$ newton/m². The length of the combustion zone decreased with increasing pressure. The temperature profile of the powder flame was S-shaped. Determination of heat release showed that in the condensed phase it increases with increasing pressure. The amount of heat released in the condensed phase and its role in heating of the charge, compared to the overall heat release, are greater for nitroglycerine powder than for hexogen. Orig. art. has: 2 figures.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics AN SSSR)

Card 2/3

ACCESSION NR: AP3003052

SUBMITTED: 02Feb62 DATE ACQ: 22Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 006 OTHER 000

Card 3/3

POKHIL P. F.
AID Nr. 989-13. 13 June

EVALUATION OF THE THERMAL EFFECT IN THE INITIAL COMBUSTION STAGE OF EXPLOSIVES (USSR)

Mal'tsev, V. M., and P. F. Pokhil. Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 2, Mar-Apr 1963, 173-174. S/207/63/000/002/024/025

The effect of the condensed phase reaction taking place during combustion of explosives was studied. The heat evolved during the condensed phase reaction (Q_1) was calculated at different pressures by the formula $Q_1 = Q_3 - Q_2$, where Q_2 equals the amount of heat transferred from the smoke-gas zone to the explosive; and Q_3 equals the total heat transferred to the explosive during combustion. The values of Q_2 and Q_3 were experimentally determined by measuring the surface temperature of the explosive and determining the axial temperature profile in the flame. Measurements with nitroglycerine were made at 22 to 66 atm; Q_1 , Q_2 , Q_3 , Q_4 (heat evolved in the gas phase), and Q (total reaction heat) were tabulated. The table shows that Q_1 increases with increasing pressures while the amount of smoke generated by dispersion of the condensed phase decreases. Measurements of the absorption and temperature profiles of

Card 1/2

AID Nr. 989-13 13 June

EVALUATION OF THE THERMAL EFFECT [Cont'd]

S/207/63/000/002/024/025

the flame were also made with hexogen and the results plotted for 20, 40, and 60 atm. The plot shows that two different flame zones exist: 1) a zone close to the surface in which absorption decreases rapidly with increasing distance from the surface explained by the fact that the concentration of the dispersed aerosol particles is highest at the surface and, owing to evaporation, decreases rapidly with distance from the surface; and 2) a zone in which absorption approaches a minimum value with increasing distance from the surface. Absorption in the second zone increases with increasing pressure, and as the pressure increases the temperature profile becomes steeper and the maximum flame temperature is shifted toward the surface. The results for hexogen show that about 15 kcal/g (about 10% of the total heat transferred to the explosive) is evolved in the condensed phase. At medium and high pressures the initial stage in the combustion of hexogen takes place in the condensed phase. Consequently, heating of hexogen during combustion takes place by heat conduction from the gas phase as well as by heat evolution in the condensed phase. [PV]

Card 2/2

POKHIL, P.F.; NEFEDOVA, O.I.; MARGOLIN, A.D.

Anomalous dependence of the gunpowder rate of burning on the
initial temperature. Dokl.AN SSSR 145 no.4:860-862 Ag '62.
(MIRA 15:7)

1. Institut khimicheskoy fiziki AN SSSR. Predstavleno akademikom
V.N.Kondrat'yevym.

(Combustion) (Gunpowder)

YAKOBI, V.A.; PLAKIDIN, V.L.; POKHILA, S.Ye.; KARPUKHIN, P.P.

Catalytic oxidation with an ozone-oxygen mixture. Part 1:
Oxidation of 2,2'-dibenzanthronyl. Zhur.ob.khim. 33 no.10:
3369-3373 0 '63. (MIRA 16:11)

PLAKIDIN, V.L.; YAKOBI, V.A.; POKHILA, S.Ye.; KARPUKHIN, P.P.

Catalytic oxidation of 2,2-dibenzanthronyl by an ozone-oxygen mixture. Kin.i kat. 3 no.2:292-295 Mr-Ap '62. (MIRA 15:11)

1. Rubezhanskiy khimicheskiy kombinat i Khar'kovskiy politekhnicheskiy institut.

(Benzanthracene) (Oxidation)

SHATILOV, V.A., inzh.; POKHIL'CHENKO, I.M., inzh.

Using the drainage system for controlling sudden outbursts. Ugol'
Ukr. 4 no.9:31-32 S '60. (MIRA 13:10)
(Coal mines and mining--Safety measures)
(Subsidence (Earth movements))

DONETS, V.I.; POMILANICH, A.M.

Unit for drying wire coils. Gaz. prom. 8 no.4:25-27 '63. (MIRA 17:10)

NOGAYTSEV, I., glavnyy zootekhnik; POKHIL'KO, G., tekhnik

Self-feeder and maintaining swine unconfined by pens. Nauka i
pered. op v sel'khoz 9 no.10:24-26 0 '59 (MIRA 13:3)

1. Sovkhoz "Kubanets", Timashevskogo rayona, Krasnodarskogo kraya.
(Swine houses and equipment)

POKHIL'KO, K.D.; DEM'YANTS, L.A.; ZAYTSEV, Kh.P.; MOSHKOVICH, I.Ye.;
PUZYR'KOV, P.I.

Centralized manufacture of spare parts for the equipment of
metallurgical plants. Metallurg 5 no.2:33-35 F '60.
(MIRA 13:5)

1. Dnepropetrovskiy sovnarkhoz i Dnepropetrovskiy metallurgicheskii institut.
(Metallurgical plants--Equipment and supplies)

POKHISOV, Natan Yakovlevich

[Diseases of the lacrimal ducts and their treatment] Zabole-
vaniia slesootvodiaschikh putei i ikh lechenie. Moskva, Medgiz,
1958. 133 p. (MIRA 13:5)

(LACRIMAL ORGANS--DISEASES)

POKHILANKO, M.A.

The course of typhoid fever in children. Zdravookhranenie 2 no.1:
63 Ja-F '59. (MIRA 12:7)

1. Iz uchastkovoy bol'nitsy s. Kotyuzhany, Floreshtskogo rayona
(glavnyy vrach - S.G. Ptashok).
(TYPHOID FEVER)

POKHILEVICH, V.A. [Pokhylevych, V.A.]

On a theorem of M. Biernacki. Dep. AN URSS no. 4:423-425 '65.
(MIRA 18:5)

1. Kiyevskiy politekhnicheskii institut.

POKHILEVICH, V.A. (M111)

M.B. Pratekile's theorem in the theory of univalent functions. Ukr.
mat. zhurn. 17 no.4:63-71 '65. (SIRA 12:8)

124-1957-1-499 D

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 1, p 62 (USSR)

AUTHOR: Pokhil'ko, A.F.

TITLE: Investigation of Pipe Lines at Low Pressures (Issledovaniye truboprovodov, rabotayushchikh pri malykh naporakh)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Candidate of Technical Sciences, presented to the Leningr. politekhn. in-t (Leningrad Polytechnic Institute), Leningrad, 1956

ASSOCIATION: Leningr. politekhn. in-t (Leningrad Polytechnic Institute), Leningrad

1. Pipes--Pressure--Analysis

Card 1/1

POKHIL'KO, G.A., starshiy nauchnyy sotrudnik

Unheated pig sties for conditions in Siberia. Sbor. nauch. soob.
NIIsel'stroia no.3:12-17 '60. (MIRA 15:6)
(Siberia--Swine houses and equipment)

MAMON, L.I., kand.tekhn.nauk, dotsent; FOKHIL'KO, K.D., inzh.; GLOZMAN, L.P.,
inzh.; NEDOBACHIIY, G.G., inzh.

Contact stuffing boxes for AP-150 pumps. Khim. mash. no.4:39-40
Ji-Ag '61. (MIRA 14:8)
(Pumping machinery)

MAMON, L.I., kand.tekhn.nauk, dotsent; POKHIL'KO, K.D., inzh.;
GLOZMAN, L.P., inzh.

Contact-screw stuffing box for MOR centrifugal pumps. Khim.
mash. no.6:43-44 N-D '61. (MIRA 15:w)
(Centrifugal pumps)

MAMON, L.I.; NEDOBACHIY, G.G.; POKHIL'KO, K.D.

Contact stuffing boxes for the packing of rotating shafts.
Metallurg 6 no.9:25-28 S '61. (MIRA 14:9)

1. Dnepropetrovskiy khimiko-tekhnologicheskii institut i
sovnarkhoz.

(Packing (Mechanical engineering))
(Rolling mills—Maintenance and repair)

POKHIL'KO, L.G.

51-6-2/26

AUTHORS: Kolesnikov, V.N. and Pokhil'ko, L.G.

TITLE: On the Problem of Measurement of Na Atom Densities in the Column of an Arc Discharge. (K voprosu ob izmerenii kontsentratsii atomov Na v stolbe dugovogo razryada.)

PERIODICAL: Optika i Spektroskopiya, 1957, Vol.II, Nr.6, pp. 689-694 (USSR)

ABSTRACT: N.A. Prilezhayeva has put forward a method for determination of the density of easily ionised impurity atoms in an isothermal plasma (Ref.1). This method was further developed by O.P. Semenova (Ref.2) and V.S. Mel'chenko (Ref.3). The density is deduced from the measurement of intensities of 2 spectral lines. The authors of the present paper discuss both theoretical and practical aspects of the above method. They show that for reliable results one must determine accurately the mean degree of ionisation of the plasma. Absolute values of the probabilities of transitions and plasma temperature should also be known accurately. The

Card 1/2

POKHIL'KO, P., ofitser zapasa (Minsk)

Her vocation. Voen. znan. 41 no.4:31 Ap '65.

(MIRA 12:3)

POKHIL'KO, V., ofitser zapasa (Yinsk)

When one works with enthusiasm. Voen. znan. 40 no. 9:32
8 '64. (MIRA 17:12)

MEYLAKHS, M.; GOLIKOV, N., komandir otryada; POKHIL'KO, P., (Grodno, BSSR)

Facts, events, people. Kryl. rod. 14 no.5:28-29 My '63.
(MIRA 16:7)

(Aeronautics)

Subject : USSR/Aeronautics - Parachutism AID P - 5529
Card 1/1 Pub. 58 - 3/15
Author : Pokhil'ko, P.
Title : Parachutists in Belorusskaya SSR
Periodical : Kryl. rod., 12, 4, D 1956
Abstract : An account of the 4th All-Belorussian competitions in parachute sports held at the end of 1956 in the city of Mohilev. Withering of the interest of the Belorussian population in parachutism is noted and discussed in some length. 1 photo.
Institution : None
Submitted : No date

POKHIL'KO, P. (Vitebsk)

Parachutists of the Vitebsk Silk Mill. Kryl.rod. 13 no.4:17
Ap '62. (MIRA 15:5)

(Vitebsk--Parachutists)

POKHIL'KO, P. (Minsk)

Sports medals of a chairman. Voenn.-znan. 41 no.12:39 D '65.
(MIRA 18:12)

POKHIL'KO, T. D., Cand Med Sci -- (diss) "Problem of pathogenesis of so-called tourniquet shock. (Experimental research)." Frunze, 1960. 16 pp; 4 pages of kymographs; (Kirgiz State Medical Inst); 300 copies; price not given; (KL, 26-60, 144)

POKHILKO, N.P.

S/271/63/000/001/019/047
D413/D308

AUTHORS: Pokhilo, N.P., Bud'ko, O.A. and Trofimenko, G.A.

TITLE: A temperature regulator of improved accuracy for thermostats

PERIODICAL: Referativnyy zhurnal, Avtomatika, telemekhanika i vychislitel'naya tekhnika, no. 1, 1963, 46, abstract 1A258 (Nauchn. zap. Odessk. politekhn. in-t, v. 38, 1962, 64-69)

TEXT: An accurate temperature regulator has been developed for thermostats used in biological and other investigations with a working volume of 1 m³. In tests of the regulator, the greatest temperature deviation from the set value at any point of the working chamber did not exceed $\pm 0.3^{\circ}\text{C}$. A high-stability copper wire resistance thermometer serves as the temperature sensor. To increase the accuracy of regulation, feedback is introduced through an additional sensor heater which is switched in by the controlling relay contacts at the same time as the thermostat heater elements. The

Card 1/2

A temperature regulator ...

S/271/63/000/001/019/047
D413/D308

sensor is connected in a bridge circuit. The output voltage from the bridge diagonal is fed to the input of a three-stage DC-coupled transistorized voltage amplifier. The power amplifier is a twin-transistor phase-sensitive circuit. Variation of ambient temperature up to $+60^{\circ}\text{C}$ and variation of supply voltage from -20 to $\pm 10\%$ had practically no effect on the operation of the regulator. 7 references.

[Abstracter's note: Complete translation]

Card 2/2

ACCESSION NR: AP4020317

S/0302/64/000/001/0042/0045

AUTHOR: Pokhilo, N. P. (Candidate of technical sciences); Koval'chuk, I. A.

TITLE: Nonvolatile static triggers

SOURCE: Avtomatika i priborostroyeniye, no. 1, 1964, 42-45

TOPIC TAGS: trigger, static trigger, nonvolatile static trigger, retaining information trigger, transistorized trigger, power supply interruption

ABSTRACT: A transistorized trigger invented by D. Hilbiber (USA Patent 2982870, Cl. 307-88,5) capable of retaining information during short-time power interruptions is criticized for its complexity and a too-short memory for high speed of operation. New trigger circuits invented by the authors (Author Certificate 158152, see Enclosure 1) use ferrite elements and take advantage either of the dynamic asymmetry created by the fact that the capacitances $C_1 \neq C_2$ (Fig 2), or of the residual magnetic flux in the ferrite cores Φ ,

Card 1/12

ACCESSION NR: AP4020317

and Φ_2 (Fig 3). This serious shortcoming is noted: the schemes require a special smoothing-filter / steep-front-forming device in the power-supply circuit. The device must take care of possible contact bouncing and easy-front voltage on resumption of the power supply. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 31Mar64

ENCL: 01

SUB CODE: CP, GE

NO REF SOV: 002

OTHER: 001

Card 2/3

POKHILLO, N. KOLAY P. *Metrology* *USSR*
AWARDS OF DIPLOMAS AND MEDALS VDNKh to Workers of Higher and Secondary Specialized
Education Institutions - Participants in Exhibition of Achievements of the
National Economy USSR for the Year 1961. (unsigned article in Byulletin'
Ministerstva i Srednogo Spetsial'nogo Obrazovaniya SSSR, No 4, April 1963).

Order of Ministry of Higher and Secondary Specialized Education USSR, 23
August 1962 (cont.) A Third Degree Diploma was awarded to Odessa Polytechnic
Institute *W*

Small Silver Medal and Valuable Prize

POKHILLO, Nikolay Pavlovich -- department head
-- for scientific leadership in developing the tensometric weights.

JPRS 20, 106, 10 June 1963 Uncl.

USSR

ACCESSION NR: AP4004097

S/0286/63/000/020/0061/0062

AUTHOR: Pokhilo, N. P.; Koval'chuk, I. A.

TITLE: Transistorized static trigger. Class 42, No. 158152

SOURCE: Byul. izobret. i tovarn. znakov, no. 20, 1963, 61-62

TOPIC TAGS: trigger, static trigger, transistorized static trigger, ferromagnetic core trigger, memory unit, ferromagnetic core memory unit, ferromagnetic memory device, ferromagnetic storage

ABSTRACT: Transistorized static trigger containing ferromagnetic core with memory unit in the event of dump has the special feature that, for the purpose of design simplification and increasing its reliability, two of the core windings are connected crosswise in the collector circuits of the trigger diodes, and the third winding is connected through a silicon diode and control transistor to the base of the trigger, the accelerating capacitance of which is several

Card 1/3

ACCESSION NR: AP4004097

times greater than that of another. [Abstractor's note: this is a complete translation of the original article.]- Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 08Oct62

DATE ACQ: 13Dec63

ENCL: 01

SUB CODE: CO

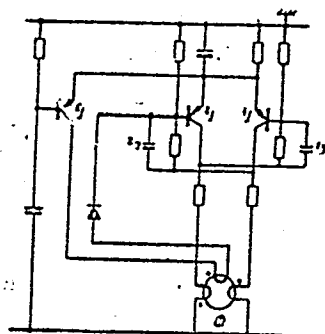
NO REF SOV: 000

OTHER: 000

Card 2/3

ACCESSION NR: AP4004097

ENCLOSURE: 01



- ferromagnetic core;
T₁ and T₂ - trigger triodes;
T₃ - control transistor;
C₁ and C₂ - accelerating capacitances

Card 3/3

POKHILO, N. P.

"Graphical Computation Method of Static Regime of a Symmetrical Trigger With Automatic Shift"

Sb. Tr. in-ta Elektrotekhn. AN Ukr SSR, No 11, 1954, 7-14

For simplification of computation of static regimes of symmetrical triggers with automatic shift a graphical method is suggested consisting in application of a nomograph. The computation assumes that the grid voltage of the open tube equals zero and the grid current is negligibly low. (RZhFiz, No 9, 1955)

SO; Sum-No 787, 12 Jan 56

POKHILOV, I.D.

Milling Machines

Mandrel for milling cutter. Stan. i instr. no. 5, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952 UNCLASSIFIED.

POKHILOV, I.D.

NIKITIN, N.T.; CHEPURNYKH, A.K.; POKHILOV, I.D.; LOSKUTOV, V.V., kandidat
tekhnicheskikh nauk, redaktor; DUGINA, N.A., tekhnicheskiiy redaktor.

[Automatic control of dimensions during grinding] Avtomaticheskii kontrol'
razmerov pri shlifovanii. Moskva, Gos. nauchno-tekhn. izd-vo Mashinostroit.
lit-ry, 1954. 23 p. (MIRA 8:1)
(Grinding and polishing)

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
<i>Chromal: Its Properties, Rolling, Drawing, and Softening by Heat-Treatment. V. A. Lobin and A. N. Shetkina (Kachetr. Stal (Special Steels), 1987, (9), 42-46).—[In Russian.] The hot-rolling properties of Chromal are intermediate between those of high-speed steel and iron, but are much closer to the latter, e.g. at 850° C. the power consumption ratio in rolling iron, Chromal, and high-speed steel is 2:3:7; this is the best temperature for rolling Chromal wire and ribbon. The finished material must be annealed at 750° C. for 20-30 minutes, and quenched in air or water.—N. A.</i>																			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION										BIBLIOGRAPHY									
1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									

POKHISOV, M. YA

"Surgical Treatment of Trachoma and Its Complications." Sub 19 May 47,
First Moscow Order of Lenin Medical Inst

Dissertations presented for degrees in science and engineering in Moscow
in 1947 (*Dr. Med. Sci*)

SO: Sum No. 457, 18 Apr. 55

POKHISOV, Natan Yakovlevich

[Diseases of the lacrimal ducts and their treatment] Zabo-
levanina slezootvodiaschikh putei i ikh lechenie. Moskva, Medgiz,
1958. 133 p. (LACRIMAL ORGANS--DISEASES) (MIRA 13:5)

POKHITON, P.

"Influence of oak on the physical and physicochemical composition of black soil." Tr. from the Russian. p. 21. (ANALELE ROMANO-SOVIETICE. SERIA SILVICULTURA-INDUSTRIA LEMINULUI SI A HARTIEI, Series a II-a, Vol. 7, no. 4, July/Aug. 1953, Series a II-a, Vol. 7, no. 5, Sept./Oct. 1953, Bucuresti, Rumania)

SO: Monthly List of East European Accessions, L. C., Vol. 3, No. 4, April 1954, Uncl.

POKHITON, P.P.

DECEASED
c1960

1961/2

SEE ILC

BOTANY

(FORESTRY)

POKHITONOV, I.I., inzh.

Modernisation of multielectrode spot-welding machines.
'Mashinostroitel' no.2:22 P '60. (MIRA 13:5)
(Electric welding--Technological innovations)

BOCHAROV, A.F.; GOFMAN, Yu.P.; BEREZINA, O.N.; POKHITONOV, Yu.P.

Morphological characteristics of the particles of herpes simplex virus. Vop. virus. 10 no.2:150-155 Mr-Apr '65.

(MIRA 18:10)

1. Institut virusologii imeni D.I.Ivanovskogo AMN SSSR, Moskva.

ACC NR: AP6032011

SOURCE CODE: UR/0243/66/000/009/0041/0044

AUTHOR: Danilov, A. I.; Pokhitonov, Yu. P.

ORG: Virology Institute im. D. I. Ivanovskiy, AMN SSSR, Moscow
(Institut virusologii AMN SSSR)

TITLE: Equipment for determining size of aerosol particles in liquid dispersion

SOURCE: Meditsinskaya promyshlennost' SSSR, no. 9, 1966, 41-44

TOPIC TAGS: aerosol, medical laboratory equipment, microphotography, microscopy, *microscope*

ABSTRACT: Microscope attachments are described which are for use in sampling liquid aerosols and in their photoregistration, thus facilitating calibration of atomizers and investigation of the dispersion condition of an aerosol cloud in a chamber. A schematic (Fig. 1) presents the basic setup, and variations for other uses are suggested; a photograph shows the exterior of the microscope (see Fig. 2). Orig. art. has: 3 figures. [W.A. 50]

Cord 1/3

UDC: 615.417.1-014.3

ACC NR: AP6032011

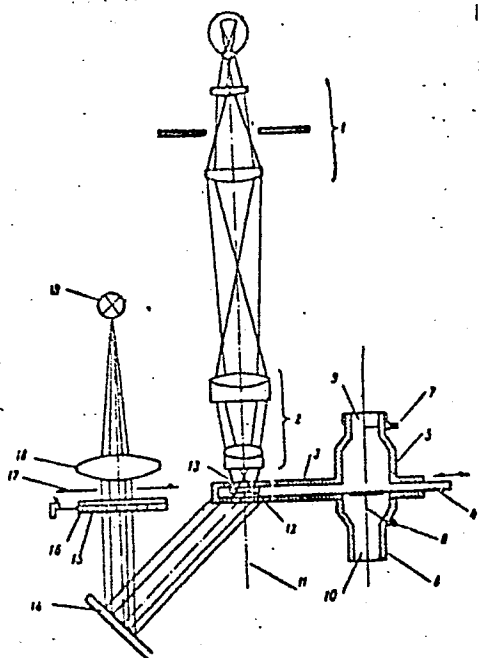


Fig. 1. Schematic of equipment for sampling, measuring, and photo-registering of aerosols

- 1 - Ocular; 2 - micro-objective;
- 3 - sedimentation cell; 4 - sample plate; 5 - precipitator funnel;
- 6 - air suction funnel; 7 - anode;
- 8 - cathode; 9 - aerosol-air feed channel; 10 - air suction channel;
- 11 - optical axis of microscope;
- 12 - aerosol precipitation plate;
- 13 - cover slide of guide plate;
- 14 - mirror; 15 - heat filter;
- 16 - ZS-12 filter; 17 - field diaphragm; 18 - collimator; 19 - incandescent bulb.

Card 2/3

ACC NR: AP6032011

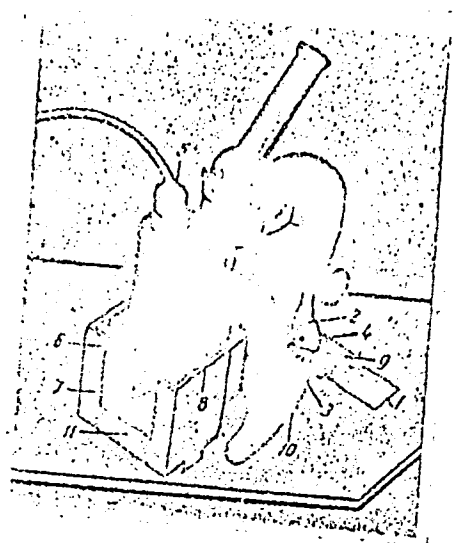


Fig. 2. General view of equipment for aerosol microscopy

- 1 - Sample plate; 2 - precipitation funnel; 3 - suction funnel;
- 4 - guiding plates; 5 - OI-19 illuminator bulb; 6 - fastening screw for illuminator bulb;
- 7 - mirror; 8 - light trap;
- 9 - anode contact; 10 - cathode contact; 11 - body of dark-field chamber.

SUB CODE: 20,07/ SUBM DATE: 19Mar66/ ORIG REF: 007/ OTH REF: 001

Card 3/3

POKHITONOVA, M. P.

"Evolution of Primary Infection in Children,
Its Clinical Forms and Prognosis." Thesis for
degree of Dr. Medical Sci. Sub 24 Oct 50,
Central Inst for the Advanced Training of Physicians

Summary 71, 4 Sep 52. Dissertations Presented
for Degrees in Science and Engineering in Moscow
in 1950. From Vechernyaya Moskva, Jan-Dec 1950.

POKHITONOVA, M.P.
KUDRYAVTSEVA, A.I.; POKHITONOVA, M.P.; OYFEBACH; BERKOS, K.P.; BELYATSKAYA,
N.G.

Healing in primary tuberculosis in children. Prof.tuberk., Moskva
no.2:23-31 Mr-Apr '50. (GML 19:3)

1. Of the Institute of Tuberculosis of the Academy of Medical
Sciences USSR (Director -- Z.A.Lebedeva; Scientific Director --
Prof. A.Ye.Rabukhin).

POKHITONOVA, M.P.

[Tuberculosis in children: clinical aspects, therapy and prophylaxis] Klinika, terapiia i profilaktika tuberkuleza u detei.
Moskva, 1952. 218 p. (MLRA 8:5)
(Tuberculosis)

POKHITONOVA, M.P.

POKHITONOVA, M.P., professor; YURKINA, A.I.

Tuberculosis in adolescents and prevention of the development of
open forms. Probl.tub. no.1:14-19 Ja-F '55. (MLRA 8:4)

1. Iz detskoy kliniki Instituta tuberkuleza Akademii meditsinskikh
nauk SSSR (dir. Z.A.Lebedeva)

(TUBERCULOSIS, PULMONARY,

in adolescents, ther. of primary complex)

(ADOLESCENCE, diseases,

tuberc., pulm., ther. of primary complex)

EXCERPTA MEDICA Sec.15 Vol.10/6 Chest Diseases June 57

1506. POKHITONOVA M. P. and IURKINA A. I. Institute of Tuberculosis, USSR. Academy of Science, Moscow. "Tuberculosis in the adolescent and prevention of their developing open forms (Russian text) PROBL. TUBERK. 1956, 1 (14-19)

At the Children's Clinic and the Department for Adolescents of the Institute of Tuberculosis extensive observations were carried out on children and adolescents from the beginning of the infection. The patients were divided into 3 groups. Group I consisted of 360 adolescents of whom 1/3 had typical primary tb and 2/3 had secondary tb (infiltrative, focal and disseminated forms). Some of these patients subsequently developed chronic fibrocavitary tb. When this group was analysed the presence of old postprimary foci were observed forming the basis for secondary tb. The detection of family or housing contact in 60% of these adolescents underlines the importance of continuous superinfection in the development of a flare-up

1506

CONT

of secondary tb. With regard to this group it may be stated that the development of pulmonary tb in adolescents depends largely on primary tb in childhood, especially with residues in the pulmonary tissue. Group II consisted of 200 children, studied over 5 - 10 yr. from the onset of the primary infection as to outcome of the primary complex and process of healing. The development of progressive forms of secondary tb was observed in only 14 patients, 12 of whom had complications in the primary complex (dissemination, pleurisy). Post-primary residues developed in the period of primary infection were found to be the origin of progressive forms of tb. Group III (114 children) was observed from the beginning of primary infection until puberty, i. e. 4-10 yr. in patients aged 3 - 14 yr.). This group contained 53 patients with primary uncomplicated tb and 61 with complicated primary tb. The change into the secondary forms occurred nearly always before or at puberty (of 22 patients 20 developed secondary tb at age 13-17). Prevention of secondary forms of tb developing in adolescents consists in long-term sanatorium treatment of children with complicated tuberculous processes and prolonged observation in clinics.

Soloveva - Moscow (XV, 7)

EXCERPTA MEDICA Sec.7 Vol.12/3 Pediatrics March 58

Pokhitonova, M. P.

810. TREATMENT OF TUBERCULOSIS IN CHILDREN (Russian text) - Pokhi-
tonova M. P. - TRUD.2-GO S'EZDA VRACH.-PEDIAT. 1956 (144-154)

The basic treatment of tb in children consists of a sanatorium-hygienic-dietetic regimen on the background of which antibacterial and in some cases desensitizing and vitamin treatment is superimposed. The use of antibacterial preparations alone is not expedient. The differences in the mechanism of action of these preparations make it necessary to use combined treatment which is prescribed in accordance with the form, phase, length of process and the patient's age. Streptomycin and PAS are indicated for children up to 2 yr. of age, and in very severe cases phthivazid as well. The same scheme of therapy is applicable to older children with recent complicated primary tb. In uncomplicated primary processes the treatment can be limited to phthivazid and PAS, whilst streptomycin, PAS and phthivazid are recommended in acute, disseminated and miliary forms. In non-pulmonary forms (superficial lymphadenitis, mesoadenitis) phthivazid and PAS are prescribed; in secondary forms of pulmonary tb with or without destruction - phthivazid and PAS, in some cases also streptomycin. Surgical methods of treatment are mostly used in secondary forms of tb in older children and children in their teens; these are combined with antibacterial therapy. Children stand up well to surgery and the recovery period is shorter than in the case of adults. Timely combined treatment of tb in the early period ensures considerable percentage of complete cures. (S)

POKHITONOVA, M.P., professor, zasluzhennyy deyatel' nauki

Modern methods of tuberculosis therapy in children [with summary
in French]. Probl.tub. 35 no.4:17-24 '57. (MIRA 10:8)

1. Iz detskoy legochnoy kliniki Instituta tuberkuleza AMN SSSR
(dir. Z.A.Lebedeva)

(STREPTOMYCIN, ther. use

tuberc. in child., with isoniazid & PAS (Rus))

(ISONIAZID, ther. use

tuberc. in child., with PAS & streptomycin (Rus))

(PARA-AMINOSALICYLIC ACID, ther. use

tuberc. in child., with isoniazid & PAS (Rus))

POKHITONOVA, M.P., prof.; YURKINA, A.I., kand.meditsinskikh nauk

Pathogenesis of open forms of tuberculosis in adolescents and
ways of preventing their rise. Trudy Inst. tub. AMN 7:143-153
'58. (MIRA 13:10)

(TUBERCULOSIS—PREVENTION)

POKHITONOVA, M.P., prof.

Current and future aspects of the treatment of tuberculous
meningitis in children. Probl.tub. 37 no.5:22-27 '59.

(MIRA 12:10)

1. Iz detskoy kliniki Instituta tuberkuleza AMN SSSR (dir. -
prof.N.A.Shmelev).

(TUBERCULOSIS, MENINGEAL - therapy)

POKHITONOVA, M.P.

A.A. Kisel' and his role in the development of concepts on
tuberculosis in children. Probl.tub. 37 no.8:97-103 '59.

(BIOGRAPHIES)

(MIRA 13:6)

(TUBERCULOSIS in inf. & child.)

KISEL', Aleksandr Andreyevich, prof., zasl.deyatel' nauki [deceased]; KISEL', V.A., sostavitel'-red.; BELYAYEVA, Ye.D., red.; BUBNOVA, M.M., red.; VLASOVA, A.N., red.; GANYUSHINA, Ye.Kh., red.; GROMBAKH, S.M., red.; KONYUS, E.M., red.; KUDRYAVTSEVA, A.I., red.; MAYZEL', I.Ye., red.; MARKUZON, V.D., red.; MOSHKOVSKIY, Sh.D., red.; PELEVINA, M.P., red.; POKHITONOVA, M.P., red.; SAVVATIMSKAYA, N.P., red.; FRIDMAN, R.A., red.; SHIRVINDT, B.G., red.; EDEL'MAN, Z.I., red.; GAVERLAND, M.I., tekhn.red.

[Selected works. Jubilee edition on the 100th anniversary of his birth, 1859-1959] Izbrannye trudy. Iubileinoe izdanie k 100-letiu so dnia rozhdeniia, 1859-1959 gg. Moskva, Gos.izd-vo med.lit-ry, 1960. 427 p.

(PEDIATRICS)

(MIRA 13:10)

PETROV, Ye.D., kand.med.nauk. Prinimali uchastiye: POKHITONOVA, M.P.,
prof.; ROL'YE, Z.Yu., prof. MASSINO, S.V., red.; MATVEYEVA,
M.M., tekhn.red.

[Textbook of methods for the climatological treatment of
tuberculosis] Metodicheskoe posobie po klimaticheskomu
lecheniiu bol'nykh tuberkulezom. Moskva, Medgiz, 1961. 64 p.

(MIRA 15:4)

1. Institut meditsinskoy klimatologii i klimatoterapii imeni
I.M.Sechenova v Yalte (for Petrov). 2. Institut tuberkuleza
AMN SSSR (for Pokhitonova, Rol'ye).
(TUBERCULOSIS) (CLIMATOLOGY, MEDICAL)

POKHITONOVA, Mariya Petrovna; YEL'NIK, V.I., red.

[Clinical aspects, treatment and prevention of tuberculosis
in children] Klinika, lechenie i profilaktika tuberkuleza u
detei. Izd.5 Moskva, Meditsina, 1965. 303 p.
(MIRA 18:4)

POKHITONOV, Yu.P.

Some characteristics of photography of tissue cultures grown in penicillin vials or flasks. Vop. virus. 9 no.5:634-635 S-O '64.
(MIRA 18:6)

1. Institut virusologii imeni Ivanovskogo AMN SSSR, Moskva.

SHAGALOV, A.F.; MIKERUN, B.I.; POKHITUN, L.Ye.

Causes of explosions in the crankcases of 9GK gas-engine compressors. Neftseper. i neftekhim. no.4:39-42 '65.

(MIRA 18:5)

MAKAROV-ZEMLYANSKIY, Aleksey Niko. layevich; PETROVA, I.P.,
retsensent; POKHLEBALOVA, I.P., spets. red.; SMIRNOVA,
M.K., red.

[Technology and equipment of the perfumery industry] Tekh-
nologiya i oborudovanie parfiumernogo proizvodstva. Mo-
skva, Pishchevaia promyshlennost', 1964. 190 p.
(MIRA 17:10)

POKHLEBALOVA, L. P.

2

New method for determination of zinc stearate in (face) powder. L. P. Pokhlebalova and N. I. Shatskaya. *Maslobojno-Zhirnaya Prom.* 21, No. 7, 27-8(1956).—Weigh 2 g. of face powder into a 100-ml. Erlenmeyer flask, add 30 ml. of 0.5N alc. KOH soln., boil in a hot-water bath for 4 min., cool, and filter through a heavy filter. Wash the ppt. thrice with 15-ml. portions of alc., and evap. the filtrate to dryness. Dissolve the residue in 20 ml. of cold water, acidify with 20 ml. of 20% soln. of H_2SO_4 , and ext. the liberated stearic acid (I) with three 15-ml. portions of either xylene, toluene, or petr. ether. Wash the solvent free of mineral acid, add 10 ml. of neutral alc., and titrate I with 0.5N alc. KOH soln. with phenolphthalein as indicator.

Med

Vladimir N. Krukavsky

1. Fabrika "Novaya zarya."

POKHLEBALOVA, L. P.

POKHLEBALOVA, L. P., inzhener; SARDANOVSKIY, M. V., inzhener.

Method for the determination of fragrance tenacity of perfumes
and Eaux de Cologne. Masl. -shir. prom. 19 no.2:22-25 '54.
(MLRA 7:4)

1. Fabrika "Novaya sarya"

(Perfumery)

DANILOVA, L.I.; inzh.; OSIPOVA, V.P.; kand.khim.nauk; POKHLEBALOVA, L.P.;
KUZNETSOVA, K.D.

Clarification of liquid perfumes with the aid of the SGL separator.
Masl.-zhir.prom. 27 no.3:37-39 Mr '61. (MIRA 14:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskikh
i natural'nykh dushistykh veshchestv (for Danilova,Osipova).
2. Fabrika "Novaya Zarya" (for Pokhlebalova). 3. Vsesoyuznyy
nauchno-issledovatel'skiy institut khimicheskogo mashinostroyeniya
(for Kuznetsova).
(Perfumes) (Separators (Machines))

POKHLENAYEV, A.A.

Using a milk substitute. Veterinariia 41 no.2:87-88 P 165.
(MIRA 18:3)

1. Glavnyy veterinarnyy vrach Kurganskogo rayona, Kurganskaya
oblast'.

SHILOV, V.I.; KORZH, V.P.; Prinimali uchastiye: SPITSIN, V.D.;
POKHLEBAYEV, L.A.; ODINOKOVA, L.P.; ALEKSEYEV, V.I.; TELEZHIKOVA, G.N.

Rolling of titanium alloy foil. Trudy Inst.met.UFAN SSSR no.9:
101-105 '62. (MIRA 16:10)

POKHLEBKIN, V.

USSR 600

Faroe Islands - Description and Travel

Faroe Islands, Vokrug. sveta, 91 no. 4 '52

Monthly List of Russian Accessions, Library of Congress, July 1952. Unclassified.

POKHLEBKIN, V.

Cities under water. Vokrug sveta 5:23-27 My '53.

(MLRA 6:6)

(Netherlands--Floods)

~~POKHLEBKIN~~, Vil'yan Vasil'yevich; KOSTINSKIY, D.N., redaktor; KOSHELEVA,
S.M., tekhnicheskii redaktor; GOLITSIN, A.V., redaktor kart.

[Denmark] Dania. Moskva, Gos.izd-vo geogr. lit-ry, 1955. 87 p;
(Denmark--Description and travel) (MIRA 8:4)

POKHLEBKIN, V.; TIKHOMIROV, V.P., redaktor; CHIZHOV, N.N., redaktor;
KOSHELEVA, S.M., tekhnicheskii redaktor:

[Sweden, Norway, Denmark, Iceland] Shvetsiia, Norvegiia, Daniia,
Islandiia. Moskva, Gos.isd-vo geogr. lit-ry, 1956. 31 p.
(Scandinavia) (Iceland) (MLRA 9:6)

POKHLEBKIN, Vil'yan Vasil'yevich; LAVRENT'YEVA, Ye.V., redaktor; GLEYKH,
D.A., tekhnicheskii redaktor

[Norway] Norvegiia. Moskva, Gos.izd-vo geogr. lit-ry, 1957. 79 p.
(Norway) (MLBA 10:8)

BACKSTROM, Knut; NOSOV, Ye.A.[translator]; MOZHAYEV, V.Ye.[translator];
SMIRNOV, V.N.[translator]; POKHLEBKIN, V.V., red.

[History of the labor movement in Sweden] Istoriia rabochego
dvizheniia v Shvetsii. Red. i vstup. stat'ia V.V.Pokhlebkina.
Moskva, Izd-vo inostr.lit-ry, 1961. 331 p. Translated from
the Swedish. (MIRA 15:4)

(Sweden--Labor and laboring classes)
(Sweden--Trade unions)

ACC NR: AP6033640

SOURCE CODE: UR/0018/66/000/010/0034/0037

AUTHOR: Pokhlebkin, Ye. (Major)

ORG: none

TITLE: Maneuver of paratrooper battalion

SOURCE: Voyennyy vestnik, no. 10, 1966, 34-37

TOPIC TAGS: ~~military operation~~, military training, ~~military~~ paratrooper
~~battalion~~ training, ground force training, ground force tactic, airborne
tactic

ABSTRACT: The paratrooper battalion in action can succeed only if the leading personnel are highly trained in military tactics, and the principal emphasis is on the advance formation. This is usually dependent on environment, but generally anti-tank weapons and ASU-57's (airborne self-propelled artillery) should be centered at the head of the battalion. Most mobile units should be at the center or at the end of the column. This enables them swiftly to counter in case of enemy attack. Night is the most favorable time for the concealed move, since at this time the paratrooper battalion is able to make the greatest progress.

SUB CODE: 15~~PS~~/SUBM DATE: none

Card 1/1

ca

"Radio-races" of yeasts and their practical significance.
G. Nardoni and E. Pothlman. *Brodskaya Prem.* 10, No. 4, 20-8 (1933).—When the yeast *Saccharomyces cerevisiae XII* is subjected to Rn, new forms are obtained, having distinct morphological and physiol. properties, which are transmitted from generation to generation. These races have shown no tendency, during the past 2 years, to revert to their original, normal form. Two derived races "A" and "B" exhibit particularly striking features. Yeast cells of the type "A" are usually spherical ($5.0 \mu \times 6.2 \mu$), and because of the intense germination of all peripheral cells, form conglomerate masses. In appearance and in the manner of reproduction, these cells recall yeasts of the type of "*Tormia*." Colonies of type "B" consist of long cells, $4.6 \mu \times 15 \mu$, having one or several vacuoles. The cells reproduce at the poles, and in general greatly resemble yeasts of the type of "*Mycoderma*." The cells on vegetating form long, branching chains. In a fermenting mash, race "B" is characterized by rapid settling, and consequently, by rapid clarification, which makes it possible to eliminate filtration. The yeast yield of "B" exceeds that of the original (*Sac. cer. XII*) by 32%. The fermentative power, measured by the amt. of CO₂ evolved, of "A," "B," and the original, is, resp., 112, 106 and 100%.

H. Cohen

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

ACCESSION NR: AT4023776

S/2723/63/000/002/0048/0052

AUTHOR: Pokhmurskiy, B. I.

TITLE: Effect of molten sodium hydroxide on some of the mechanical properties of low-carbon steel

SOURCE: AN UkrRSR. Insty*tut mashy*noznavstva i avtomaty*ky*, L'viv. Vliyaniye rabochikh sred na svoystva materialov (Effect of active media on the properties of materials), no. 2, 1963, 48-52

TOPIC TAGS: steel, molten sodium hydroxide, steel mechanical property, low-carbon steel, sodium hydroxide

ABSTRACT: Molten salt, hydroxides, and their mixtures are used more and more in industry, especially for nuclear power plants where they are employed as fuel, moderators and solvents for heat-radiating elements. In this connection, the corrosive effect of these melts on steel is of practical importance. Previous investigations have shown that at sufficiently high temperatures almost all metals are corroded in baths of sodium hydroxide, forming darkly colored oxides and liberating hydrogen. For steel, aluminum, and other metals at 673-773K the corrosion rate at first reaches a maximum and then drops sharply. Under stress, corrosion cracking of steel such as is observed

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ACCESSION NR: AT4023776

in aqueous solutions does not occur in molten sodium hydroxide. Studies on normalized low-carbon steel (0.25%C) showed that at a temperature of 673K the ultimate strength and durability is increased and the plasticity is decreased when the specimen is filled with molten sodium hydroxide (see Fig. 1 of the Enclosure). Increasing the temperature to 773K sharply reduces the effect of the molten NaOH on the strength of the steel. Orig. art. has: 5 figures.

ASSOCIATION: Insty*tut mashy*nozhavstva i avtomaty*ky* AN UkrSSR,, L'vov
(Institute of Machine Technology and Automation, AN UkrSSR)

SUBMITTED: 00

DATE ACQ: 10Apr64

ENCL: 01

SUB CODE: MM

NO REF SOV: 006

OTHER: 002

Card

2/3

ACCESSION NR: AT4023776

ENCLOSURE: 01

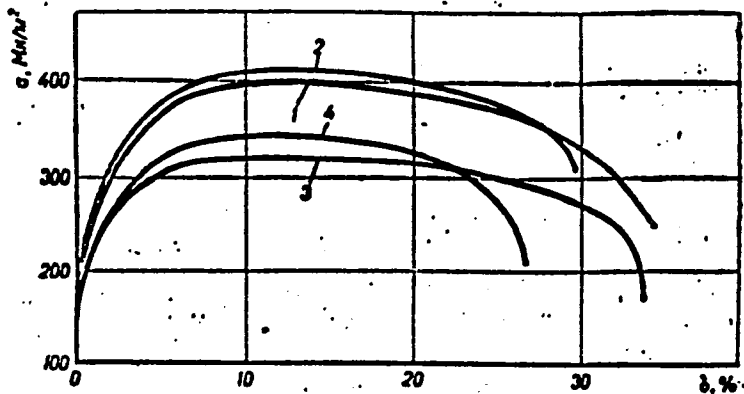


Fig. 1 - Stress-strain curves for steel 20 in the normalized condition at 673K.

- 1 - samples tested in open air, stretching rate 1.67×10^{-4} m/sec;
- 2 - inner surface of samples in contact with molten NaOH stretching rate 1.67×10^{-4} m/sec;
- 3 - samples tested in open air, stretching rate 9.2×10^{-7} m/sec;
- 4 - inner surface of samples in contact with molten NaOH, stretching rate 9.2×10^{-7} m/sec.

Card 3/3

POKHMURSKIY, V.I.; KARPENKO, G.V.

Effect of conditions of thermomechanical processing on the corrosion
resistance of steel. Vliian. rab. sred na svois. mat. no.3:70-74 '64.
(MIRA 17:10)

I 40902-65 EWT(m)/EPF(c)/EWP(w)/EWA(d)/T/EWP(t)/EWP(k)/EWP(b)/EWA(c) Pf-4 JD/
 8/0369/65/001/001/0049/0053

ACCESSION NR: AP5009281 H5/WB

AUTHOR: Pokhmurskiy, V.I.; Karpenko, G.V.

TITLE: Influence of high-temperature thermomechanical treatment on the cyclic strength of steel 45 in certain working media

SOURCE: Fiziko-khimicheskaya mekhanika materialov, v. 1, no. 1, 1965, 49-53

TOPIC TAGS: steel strength, steel corrosion, cyclic strength, thermomechanical treatment, steel hardening, fatigue strength/steel 45

ABSTRACT: The authors studied the influence of several variations of a promising new hardening method, the high-temperature thermomechanical treatment (HTMT) of steel 45, on its fatigue strength under conditions of simultaneous action of cyclic stresses and certain working media, and also the influence of preliminary corrosion on the fatigue strength of thermomechanically treated steel. The HTMT consisted of deforming specimens in the austenitic state by torsion, quenching immediately, and tempering. The effectiveness of HTMT in raising the fatigue limit of steel in a neutral medium (air) and corrosive medium (3% aqueous NaCl solution) is manifested in low-temperature tempering, i.e., in steel with a martensite or troostite-martensite structure. The presence of an optimum degree of deformation of the specific twist angle was established; it corresponds to the

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L 40902-65

ACCESSION NR: AP5009281

2
maximum increase in the fatigue and corrosion-fatigue strength of low-tempered steel. For corrosion-fatigue strength, the degree of deformation shifts toward higher values. The decrease in the fatigue limit of steel associated with an increase in the specific twist angle above the optimum value is explained by an intensification of the recrystallization of austenite deformed during the HTMT, and also by the appearance of products of non-martensitic transformation in the hardened steel. The hardening influence of the HTMT on the fatigue strength of the steel is also preserved after the preliminary corrosion of the specimens. Orig. art. has: 4 figures.

ASSOCIATION: FMI AN Ukr SSR, Lvov

SUBMITTED: 03Aug64

ENCL: 00

SUB CODE: MM

NO REF SOV: 004

OTHER: 000

llc
Card 2/2

POKHURS'KIY, V. I.

ACCESSION NR: AP4009736

S/0021/63/000/012/1600/1602

AUTHOR: Pokhurs'ky'y, V. I.; Karpenko, G. V. (Corresponding member)

TITLE: Thermo-mechanical treatment of steel utilizing torsion deformation

SOURCE: AN UkrRSR. Dopovidi, no. 12, 1963, 1600-1602

TOPIC TAGS: thermo-mechanical treatment, steel, steel 45, torsion deformation, strength increase, corrosion resistance improvement, high-temperature austenization, low-temperature annealing, medium-carbon steel, structural steel, torsion-strengthened steel

ABSTRACT: The authors selected torsion for thermomechanical treatment of steels as a type of plastic deformation which permits considerable deformation without noticeable cross-section changes. They analyzed the effect of plastic deformation by torsion, in the process of thermomechanical treatment, on the change in strength, hardness, plasticity, structure and corrosion resistance of steel 45 austenized at 1170 - 1190K. The maximum increase in strength (fatigue limit up to 2.38 hectonewtons /m²) was observed for an angle of torsion $\alpha = 0.89$ rad/mm and low annealing temperature (383-500K). Increase of annealing temperature (573-673K) and increase in the degree of deformation (0.264 - 0.485 rad/mm) led to the annulment of the

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ACCESSION NR: AP4009736

strengthening effect (see Fig. 1 of Enclosure). Changes in strength were accompanied by corresponding changes in hardness without noticeable changes in plasticity. Corrosion resistance of thermomechanically treated steel 45 is considerably greater than the corrosion resistance of the control samples (see Fig. 2 of Enclosure). Metallographic studies showed increase in the dispersion structure of the thermomechanically treated steel as compared with conventional hardening. Plastic deformation of austenite reduces precipitation of finely dispersed carbides from martensite during the low-temperature annealing (383K) and increases its thermal stability. This then leads to an increased corrosion resistance. Orig. art. has: 2 figures.

ASSOCIATION: Instytut Mashynostroyeniya ta Avtomatizatsiy AN URSR (Institute of Mechanical Engineering and Automation AN URSR)

SUBMITTED: 15Mar63

DATE ACQ: 08Feb64

ENCL: 02

SUB CODE: ML

NO REF SOV: 000

OTHER: 000

Card 2/2

POKHIMUSKIY, V.I. [Pokhmurs'kyi, V.I.]; KARPENKO, G.V. [Karpenko, H.V.]

Thermomechanical processing of steel using torsional deformation.

Dop. AN URSR no.12:1600-1602 '63.

(1964 17:9)

1. Institut mashinovedeniya i avtomatiki AN UkrSSR. 2. Oklen-
korrespondent AN UkrSSR (for Karpenko).

POKHURSII, V.I.

Effect of fused sodium hydroxide on certain mechanical properties
of low-carbon steel. Vitiun, rab. sred na svoia. mat. no.2428-52
'63. (MLR: 17110)

L 32055-65 ENT(m)/ENP(w)/EMA(d)/T/ENP(t)/ENP(k)/ENP(b) PF-4 MJW/JD/HW

ACCESSION NR: AT4049940

S/2723/64/000/003/0063/0069

AUTHOR: Pokhmurskiy, V. I.

TITLE: Influence of thermomechanical treatment on the mechanical properties of steels 45, 60S2 and ShKh15

SOURCE: AN UkrSSR. Fiziko-mekhanicheskiy institut. Vliyaniye rabochikh sred na svoystva materialov, no. 3, 1964, 63-69

TOPIC TAGS: thermomechanical treatment, steel strength, torsional strain hardening, steel tempering, steel austenization / steel 45, steel 60S2, steel ShKh15

ABSTRACT: The author studied the possible strengthening of steel by a combination of torsional plastic deformation and thermomechanical treatment at either low or high temperatures. Torsional deformation was considered to be of particular interest because it yields high densities of dislocations without requiring significant changes of cross section in the components being strengthened. Research has shown that torsional deformation combined with the more usual types of thermomechanical treatment increases both the static and the fatigue strength of steel. In the present paper, optimum deformation requirements, corresponding to maximum increases in strength for both high and low temperature mechanical treatment, were determined for steel 45 and steel 60S2. Low temperature thermomechanical treat-

L 32055-65

ACCESSION NR: AT4049940

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ment gave better results for steel 60S2, but here the required strain was higher. With steel 45, the effectiveness of low temperature strain hardening is markedly decreased when the austenization temperature exceeds the A_{c3} point by 250 - 300C. Maximum strengthening of steel ShKh15 by low temperature strain hardening occurs at deformation temperatures corresponding to the maximum stability of the super-cooled austenite. The effects are highly dependent on the tempering temperatures. Thus, steel 45 and 60S2 show good strengthening at low tempering temperatures, while steel ShKh15 still shows good effects at high (440C) tempering temperatures. "The IMA-5 machine for determining the bending strength was developed by engineers R. G. Pogoretskiy and M. M. Matseyko at the IMA AN USSR." Orig. art. has: 1 table and 5 figures.

ASSOCIATION: None

SUBMITTED: 20Jun63

ENCL: 00

SUB CODE: MM

NO REF SOV: 006

OTHER: 000

Card 2/2

L 60256-65 EPF(c)/EWP(k)/EWP(z)/EWA(c)/EWT(m)/EWP(b)/T/EWA(d)/EWP(w)/EWP(t)
 PF-4 MJW/JD/HW/WB

ACCESSION NR: AP5012660

UR/0369/65/001/002/0244/0246 48

AUTHOR: Pokhmurskiy, V. I.; Boltarovich, A. V.; Babey, Yu. I. 47

TITLE: The effect of mechanical processing on fatigue strength in Kh17N2 and Kh17N5M3 (SN-3) steels 18 78

SOURCE: Fiziko-khimicheskaya mekhanika materialov, v. 1, no. 2, 1965, 244-246

TOPIC TAGS: metal mechanical property, fatigue strength, metal physical property, stainless steel, steel corrosion 16 76

ABSTRACT: Steels of the transitional austenite-martensite class (SN-3) and martensite-ferrite steel Kh17N2 undergo certain physical and chemical changes in the surface layer during mechanical processing. To show this effect, fatigue tests were conducted in air and in a corrosive medium on samples of these two steels, prepared by 2 technological processes (described). Fatigue and corrosion-fatigue strength were tested by pure cyclic bending at 3000 cpm. 3% NaCl (imitation sea water) was used as the corrosive medium. It was found that grinding as a finishing operation reduces the fatigue strength of Kh17N2 and SN-3 steels by approximately

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L 60256-65

ACCESSION NR: AP5012660

25% compared to parts reannealed and finish ground by band after grinding. Since annealing of Kh17N2 and SN-3 stainless steels at 450-550°C does not basically change the structure of the metal, but improves certain mechanical characteristics, it is recommended as a finish operation. Identical microgeometry of the surface and physical state of surface layers in the samples must be maintained to obtain comparable results in tests of cyclic strength for steels of this class. Orig. art. has: 1 figure.

ASSOCIATION: FMI AN UkrSSR, Lvov

SUBMITTED: 05Jan64

ENCL: 00

SUB CODE: MM

NO REF SOV: 002

OTHER: 000

Lip
Card 2/2

L 32057-65 EMT(m)/EWP(w)/TMA(d)/T/EWP(t)/EMP(k)/EMP(b) Pf-L MJN/JD/HW

ACCESSION NR: AT4049941

S/2723/64/000/003/0070/0074

30

AUTHOR: Pokhmurskiy, V. I.; Karpenko, G. V. (Corresponding member AN UkrSSR)

B+1

TITLE: Effect of the conditions of thermomechanical treatment on the corrosion resistance of steels

18

18

SOURCE: AN UkrSSR. Fiziko-mekhanicheskiy institut. Vliyaniye rabochikh sred na svoystva materialov, no. 3, 1964, 70-74

TOPIC TAGS: corrosion resistance, thermomechanical, strain hardening, steel strength, steel corrosion, torsional plastic deformation / steel 45, steel 60S2

18

18

ABSTRACT: The authors studied the effect of thermomechanical treatment on the corrosion resistance of steels 45 and 60S2 in 54% aqueous sulfuric acid. The thermomechanical treatment consisted of rapid heating at 30C per second, torsional plastic deformation at varying rates and subsequent oil tempering. The exposure to a corrosive medium was continued for 10^4 seconds at a constant temperature. Optimum strength was found to be produced by a torsional gradient of 0.079 radians/millimeter. A significant increase in corrosion resistance was produced by low temperature tempering (110-220C), while tempering temperatures of 300 - 400C re-

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L 32057-65

ACCESSION NR: AT4049941

sulted in practically no improvement. Metallographic studies showed that the optimum conditions of thermomechanical treatment involved small torsional deformations. These derange the microstructure insignificantly, but prevent the development of carbides, thus decreasing the number of microelements and leading to enhanced corrosion resistance. Large deformations were also found to attenuate carbide production, but significantly deranged and activated the microstructure, thus leading to decreased corrosion resistance. It is concluded that optimized conditions of thermomechanical treatment can enhance both the strength and the corrosion resistance of steels. Orig. art. has: 2 tables and 3 figures.

ASSOCIATION: None

SUBMITTED: 20Jun63

ENCL: 00

SUB CODE: MM

NO REF SOV: 006

OTHER: 000

Card 2/2

L 33264-65 EWT(m)/EWA(d)/T/EWP(t)/EWP(b) JD

ACCESSION NR: AP5005100

S/0129/65/000/002/0029/0035

AUTHOR: Pokhmurskiy, V. I.; Karpenko, G. V.

TITLE: Thermomechanical treatment of carbon structural steel

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 2, 1965, 29-35

TOPIC TAGS: thermomechanical treatment, steel structure, fatigue strength, carbon steel, structural steel, austenitization, plastic deformation, torsion testing / steel 45

ABSTRACT: The mechanical and electrochemical properties of steel 45 were investigated in relation to the austenitization temperature, heating rate, extent of deformation, and temperature of subsequent tempering. The fatigue strength and corrosion-fatigue strength were determined. High-temperature thermomechanical treatment consisted of the following: the specimens were heated at different rates to the austenitization temperature, deformed by torsion, and quenched in a stream of oil. To prevent recrystallization of the austenite, the time between the end of deformation and start of quenching did not exceed 1 sec. The thermomechanically treated specimens were tempered at various temperatures for 1 hr. Plastic deformation was determined by the magnitude of the specific angle of twist, characterizing the displacement of metal in planes perpendicular to the specimen axis per

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unit length, and by elongation of the surface fibers along the lines of the principal tensile stresses. Specimens were taken from the treated billets for static, dynamic, fatigue, and corrosion testing and for metallographic, carbide, and x-ray structural analyses. It was found that the tensile strength and hardness increased as deformation increased only up to a certain limit ($\dot{\varphi} = 0.079$ rad/min). The degree of deformation did not affect tensile strength when the tempering temperature was raised to 450C. The effect of high-temperature thermomechanical treatment was evident only with low-temperature tempering, i.e., in steel with a martensite and troosto-martensite structure. A decrease in the heating rate during austenitizing from 30 to 5 deg/sec. did not change the tensile strength or ductility, while increasing the rate to 200 deg/sec. increased the tensile strength, the maximal value being 250-260 kg/mm², or 15-20 kg/mm² more than that obtained at a heating rate of 30 deg/sec. There was an optimal degree of deformation corresponding to a maximal increase in mechanical properties, but this was not constant and depended on the character and conditions of the tests. The conclusions of other authors, who negated the role of comminution of martensite crystals in the hardening of steel after high-temperature thermomechanical treatment, were confirmed by the authors of this article. It was revealed that high-temperature

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thermomechanical treatment was especially effective in steel with a martensite and troosto-martensite structure and that its use with plastic deformation by torsion is promising for shafts, rods, torsion springs, and other parts with the shape of bodies of revolution. Orig. art. has: 2 tables and 7 figures.

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Thermomechanical treatment of structural carbon steel.

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